



SEQUENCE LISTING



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<20> MAMMALIAN SUBTILISIN/KEXIN ISOZYME SKI-1: A PROPROTEIN CONVERTASE
WITH A UNIQUE CLEAVAGE SPECIFICITY

<130> IRCM

<140> PCT/CA99/01058
<141> 1999-11-04

<150> CA 2,249,648
<151> 1998-11-04

<160> 78

<170> PatentIn version 3.2

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Tyr Pro Ser Asp Phe Glu Val Ile Gln Ile Lys Glu Lys Gln Lys Ala
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Thr Gly Arg His Ser Ser Arg Arg Leu Leu Arg Ala Ile Pro Arg Gln
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Gly Ala Asn Val Arg Val Ala Val Phe Asp Thr Gly Leu Ser Glu Lys
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His Pro His Phe Lys Asn Val Lys Glu Arg Thr Asn Trp Thr Asn Glu
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His Ile Phe Arg Val Phe Thr Asn Asn Gln Val Ser Tyr Thr Ser Trp
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Val His Thr Asn Phe Arg Asp Met Tyr Gln His Leu Arg Ser Met Gly				
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Glu Ala His Leu Gly Asp Pro Lys Pro Arg Pro Leu Pro Ala Cys Pro
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His Leu Ser Trp Ala Lys Pro Gln Pro Leu Asn Glu Thr Ala Pro Ser
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Pro	Phe	Val	Asp	Lys	Val	Trp	Glu	Leu	Thr	Ala	Asn	Asn	Val	Ile	Met	
			320					325					330			
gtt	tct	gct	att	ggc	aat	gac	gga	cct	ctt	tat	ggc	act	ctg	aat	aac	1540
Val	Ser	Ala	Ile	Gly	Asn	Asp	Gly	Pro	Leu	Tyr	Gly	Thr	Leu	Asn	Asn	

335						340						345						
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Pro	Ala	Asp	Gln	Met	Asp	Val	Ile	Gly	Val	Gly	Gly	Ile	Asp	Phe	Glu			
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Asp	Asn	Ile	Ala	Arg	Phe	Ser	Ser	Arg	Gly	Met	Thr	Thr	Trp	Glu	Leu			
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Pro	Gly	Gly	Tyr	Gly	Arg	Met	Lys	Pro	Asp	Ile	Val	Thr	Tyr	Gly	Ala			
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Ala	Leu	Ile	Ala	Ser	Ala	Arg	Arg	Leu	Pro	Gly	Val	Asn	Met	Phe	Glu			
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caa	ggc	cac	ggc	aag	ctc	gat	ctg	ctc	aga	gcc	tat	cag	atc	ctc	aac	1924		
Gln	Gly	His	Gly	Lys	Leu	Asp	Leu	Leu	Arg	Ala	Tyr	Gln	Ile	Leu	Asn			
465			470			475												
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gag	tgt	ccc	tac	atg	tgg	ccc	tac	tgc	tcc	cag	ccc	atc	tac	tat	gga	2020		
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aac	gga	gac	aac	att	gaa	gtt	gcc	ttc	tcc	tac	tcc	tcg	gtc	tta	tgg	2164		
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575			580			585												

tcc cca gca gag aca gag tca aaa aat ggt gca gaa cag act tca aca Ser Pro Ala Glu Thr Glu Ser Lys Asn Gly Ala Glu Gln Thr Ser Thr 590 595 600	2308
gta aag ctc ccc att aag gtg aag ata att cct act ccc ccg cga agc Val Lys Leu Pro Ile Lys Val Lys Ile Ile Pro Thr Pro Pro Arg Ser 605 610 615 620	2356
aag aga gtt ctc tgg gat cag tac cac aac ctc cgc tat cca cct ggc Lys Arg Val Leu Trp Asp Gln Tyr His Asn Leu Arg Tyr Pro Pro Gly 625 630 635	2404
tat ttc ccc agg gat aat tta agg atg aag aat gac cct tta gac tgg Tyr Phe Pro Arg Asp Asn Leu Arg Met Lys Asn Asp Pro Leu Asp Trp 640 645 650	2452
aat ggt gat cac atc cac acc aat ttc agg gat atg tac cag cat ctg Asn Gly Asp His Ile His Thr Asn Phe Arg Asp Met Tyr Gln His Leu 655 660 665	2500
aga agc atg ggc tac ttt gta gag gtc ctc ggg gcc ccc ttc acg tgt Arg Ser Met Gly Tyr Phe Val Glu Val Leu Gly Ala Pro Phe Thr Cys 670 675 680	2548
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gag tac ttc cct gaa gag atc gcc aag ctc cgg agg gac gtg gac aac Glu Tyr Phe Pro Glu Glu Ile Ala Lys Leu Arg Arg Asp Val Asp Asn 705 710 715	2644
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gat acc gga gga gct aac atc cca gct ctg aat gag ctg ctg tct gtg Asp Thr Gly Gly Ala Asn Ile Pro Ala Leu Asn Glu Leu Leu Ser Val 750 755 760	2788
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cca gcc tgt cca cgc ttg tct tgg gcc aag cca cag cct tta aac gag Pro Ala Cys Pro Arg Leu Ser Trp Ala Lys Pro Gln Pro Leu Asn Glu 925 930 935 940	3316
acg gcg ccc agt aac ctt tgg aaa cat cag aag cta ctc tcc att gac Thr Ala Pro Ser Asn Leu Trp Lys His Gln Lys Leu Leu Ser Ile Asp 945 950 955	3364
ctg gac aag gtg gtg tta ccc aac ttt cga tcg aat cgc cct caa gtg Leu Asp Lys Val Val Leu Pro Asn Phe Arg Ser Asn Arg Pro Gln Val 960 965 970	3412
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ttt gcc ttc ctg gga gcc atg gtg gtc ctg gcc ttc ttt gtg gta Phe Ala Phe Leu Gly Ala Met Val Val Leu Ala Phe Phe Val Val 1005 1010 1015	3553
caa atc aac aag gcc aag agc agg ccg aag cgg agg aag ccc agg Gln Ile Asn Lys Ala Lys Ser Arg Pro Lys Arg Arg Lys Pro Arg 1020 1025 1030	3598
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cct tcg gtg tgaccggcag cctggctgac cgtgagggcc agagagagcc Pro Ser Val 1050	3692
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Gly Lys Lys His Leu Gly Asp Arg Leu Glu Lys Lys Ser Phe Glu Lys
20          25          30

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Ala Pro Cys Pro Gly Cys Ser His Leu Thr Leu Lys Val Glu Phe Ser
35          40          45

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Ser Thr Val Val Glu Tyr Glu Tyr Ile Val Ala Phe Asn Gly Tyr Phe
50          55          60

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Thr Ala Lys Ala Arg Asn Ser Phe Ile Ser Ser Ala Leu Lys Ser Ser
65          70          75          80

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Glu Val Asp Asn Trp Arg Ile Ile Pro Arg Asn Asn Pro Ser Ser Asp
85          90          95

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Tyr Pro Ser Asp Phe Glu Val Ile Gln Ile Lys Glu Lys Gln Lys Ala
100          105          110

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Gly Leu Leu Thr Leu Glu Asp His Pro Asn Ile Lys Arg Val Thr Pro
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Gln Arg Lys Val Phe Arg Ser Leu Lys Tyr Ala Glu Ser Asp Pro Thr
 130 135 140
 Val Pro Cys Asn Glu Thr Arg Trp Ser Gln Lys Trp Gln Ser Ser Arg
 145 150 155 160
 Pro Leu Arg Arg Ala Ser Leu Ser Leu Gly Ser Gly Phe Trp His Ala
 165 170 175
 Thr Gly Arg His Ser Ser Arg Arg Leu Leu Arg Ala Ile Pro Arg Gln
 180 185 190
 Val Ala Gln Thr Leu Gln Ala Asp Val Leu Trp Gln Met Gly Tyr Thr
 195 200 205
 Gly Ala Asn Val Arg Val Ala Val Phe Asp Thr Gly Leu Ser Glu Lys
 210 215 220
 His Pro His Phe Lys Asn Val Lys Glu Arg Thr Asn Trp Thr Asn Glu
 225 230 235 240
 Arg Thr Leu Asp Asp Gly Leu Gly His Gly Thr Phe Val Ala Gly Val
 245 250 255
 Ile Ala Ser Met Arg Glu Cys Gln Gly Phe Ala Pro Asp Ala Glu Leu
 260 265 270
 His Ile Phe Arg Val Phe Thr Asn Asn Gln Val Ser Tyr Thr Ser Trp
 275 280 285
 Phe Leu Asp Ala Phe Asn Tyr Ala Ile Leu Lys Lys Ile Asp Val Leu
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 Asn Leu Ser Ile Gly Gly Pro Asp Phe Met Asp His Pro Phe Val Asp
 305 310 315 320
 Lys Val Trp Glu Leu Thr Ala Asn Asn Val Ile Met Val Ser Ala Ile
 325 330 335
 Gly Asn Asp Gly Pro Leu Tyr Gly Thr Leu Asn Asn Pro Ala Asp Gln
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 Met Asp Val Ile Gly Val Gly Gly Ile Asp Phe Glu Asp Asn Ile Ala
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 Arg Phe Ser Ser Arg Gly Met Thr Thr Trp Glu Leu Pro Gly Gly Tyr

370		375		380
Gly 385	Arg Met Lys Pro Asp 390	Ile Val Thr Tyr	Gly 395	Ala Gly Val Arg Gly 400
Ser	Gly Val Lys Gly 405	Gly Cys Arg Ala Leu 410	Ser Gly Thr	Ser Val Ala 415
Ser	Pro Val Val 420	Ala Gly Ala Val Thr 425	Leu Leu Val Ser	Thr Val Gln 430
Lys	Arg Glu Leu Val 435	Asn Pro Ala Ser Met Lys 440	Gln Ala Leu Ile Ala	
Ser	Ala Arg Arg Leu Pro 450	Gly Val Asn Met Phe 455	Glu Gln Gly His Gly	
Lys 465	Leu Asp Leu Leu Arg 470	Ala Tyr Gln Ile Leu 475	Asn Ser Tyr Lys Pro	
Gln	Ala Ser Leu Ser 485	Pro Ser Tyr Ile Asp 490	Leu Thr Glu Cys Pro Tyr	
Met	Trp Pro Tyr Cys Ser 500	Gln Pro Ile Tyr Tyr 505	Gly Gly Met Pro Thr	
Val	Val Asn Val Thr Ile Leu 515	Asn Gly Met Gly Val 520	Thr Gly Arg Ile	
Val	Asp Lys Pro Asp Trp 530	Gln Pro Tyr Leu Pro 535	Gln Asn Gly Asp Asn	
Ile 545	Glu Val Ala Phe Ser 550	Tyr Ser Ser Val Leu 555	Trp Pro Trp Ser Gly	
Tyr	Leu Ala Ile Ser 565	Ile Ser Val Thr Lys 570	Lys Ala Ala Ser Trp Glu	
Gly	Ile Ala Gln Gly 580	His Val Met Ile Thr 585	Val Ala Ser Pro Ala Glu	
Thr	Glu Ser Lys Asn Gly 595	Ala Glu Gln Thr Ser 600	Thr Val Lys Leu Pro	
Ile	Lys Val Lys Ile Ile 610	Pro Thr Pro Pro Arg 615	Ser Lys Arg Val Leu	
				620

Trp Asp Gln Tyr His Asn Leu Arg Tyr Pro Pro Gly Tyr Phe Pro Arg
 625 630 635 640

Asp Asn Leu Arg Met Lys Asn Asp Pro Leu Asp Trp Asn Gly Asp His
 645 650 655

Ile His Thr Asn Phe Arg Asp Met Tyr Gln His Leu Arg Ser Met Gly
 660 665 670

Tyr Phe Val Glu Val Leu Gly Ala Pro Phe Thr Cys Phe Asp Ala Ser
 675 680 685

Gln Tyr Gly Thr Leu Leu Met Val Asp Ser Glu Glu Glu Tyr Phe Pro
 690 695 700

Glu Glu Ile Ala Lys Leu Arg Arg Asp Val Asp Asn Gly Leu Ser Leu
 705 710 715 720

Val Ile Phe Ser Asp Trp Tyr Asn Thr Ser Val Met Arg Lys Val Lys
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Phe Tyr Asp Glu Asn Thr Arg Gln Trp Trp Met Pro Asp Thr Gly Gly
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Ala Asn Ile Pro Ala Leu Asn Glu Leu Leu Ser Val Trp Asn Met Gly
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Phe Ser Asp Gly Leu Tyr Glu Gly Glu Phe Thr Leu Ala Asn His Asp
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Met Tyr Tyr Ala Ser Gly Cys Ser Ile Ala Lys Phe Pro Glu Asp Gly
 785 790 795 800

Val Val Ile Thr Gln Thr Phe Lys Asp Gln Gly Leu Glu Val Leu Lys
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Gln Glu Thr Ala Val Val Glu Asn Val Pro Ile Leu Gly Leu Tyr Gln
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Ile Pro Ala Glu Gly Gly Gly Arg Ile Val Leu Tyr Gly Asp Ser Asn
 835 840 845

Cys Leu Asp Asp Ser His Arg Gln Lys Asp Cys Phe Trp Leu Leu Asp
 850 855 860

Ala Leu Leu Gln Tyr Thr Ser Tyr Gly Val Thr Pro Pro Ser Leu Ser
865 870 875 880

His Ser Gly Asn Arg Gln Arg Pro Pro Ser Gly Ala Gly Ser Val Thr
885 890 895

Pro Glu Arg Met Glu Gly Asn His Leu His Arg Tyr Ser Lys Val Leu
900 905 910

Glu Ala His Leu Gly Asp Pro Lys Pro Arg Pro Leu Pro Ala Cys Pro
915 920 925

Arg Leu Ser Trp Ala Lys Pro Gln Pro Leu Asn Glu Thr Ala Pro Ser
930 935 940

Asn Leu Trp Lys His Gln Lys Leu Leu Ser Ile Asp Leu Asp Lys Val
945 950 955 960

Val Leu Pro Asn Phe Arg Ser Asn Arg Pro Gln Val Arg Pro Leu Ser
965 970 975

Pro Gly Glu Ser Gly Ala Trp Asp Ile Pro Gly Gly Ile Met Pro Gly
980 985 990

Arg Tyr Asn Gln Glu Val Gly Gln Thr Ile Pro Val Phe Ala Phe Leu
995 1000 1005

Gly Ala Met Val Val Leu Ala Phe Phe Val Val Gln Ile Asn Lys
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<220>

<221> misc_feature

<222> (2)..(7)

<223> Xaa can be any naturally occurring amino acid
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<210> 12

<211> 9

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<210> 17

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<220>
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<400> 17

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 1 5

<210> 18
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28

<210> 20
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 <400> 20
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 <223> Description of Artificial Sequence: Oligonucleotide

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 <210> 22
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 agccctatta cctgaacctg 20

 <210> 24
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Oligonucleotide

 <400> 24
 gaatctgaaa gaactccccc 20

 <210> 25
 <211> 20

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Oligonucleotide

 <400> 25
 ttccgagatt ccatacctacg 20

 <210> 26
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Oligonucleotide

 <400> 26
 tgcagctcag caggtctatg 20

 <210> 27
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Oligonucleotide

 <400> 27
 tctcctccaa cctcaaccac 20

 <210> 28
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Oligonucleotide

 <400> 28
 ccagcctgtc atcctcaata tc 22

 <210> 29
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Oligonucleotide

 <400> 29
 ggagccatgg attgcacttt c 21

 <210> 30
 <211> 20
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Oligonucleotide

<400> 30
aggagctcaa tgtggcagga 20

<210> 31
<211> 27
<212> DNA
<213> Homo sapiens

<400> 31
gtgaccatga agcttgtcaa catctgg 27

<210> 32
<211> 26
<212> DNA
<213> Homo sapiens

<400> 32
acactggtcc ctgagagggc ccggca 26

<210> 33
<211> 21
<212> DNA
<213> Homo sapiens

<400> 33
attgacctgg acaagggtgg g 21

<210> 34
<211> 57
<212> DNA
<213> Homo sapiens

<400> 34
ggatcctcta gatcagtggt ggtggtggtg gtggtgctcc tggtttagc ggccagg 57

<210> 35
<211> 24
<212> DNA
<213> Homo sapiens

<400> 35
ctcgaggag aggctggctc ttcg 24

<210> 36
<211> 28
<212> DNA
<213> Homo sapiens

<400> 36
ctcgagtgtc tgggcaacct ggcgcggg 28

<210> 37
<211> 14
<212> PRT
<213> Homo sapiens

<400> 37

Lys Ala Gly Ser Arg Gly Leu Thr Ser Leu Ala Asp Thr Phe
1 5 10

<210> 38
<211> 27
<212> PRT
<213> Homo sapiens

<400> 38

Gly Gly Ala His Asp Ser Asp Gln His Pro His Ser Gly Ser Gly Arg
1 5 10 15

Ser Val Leu Ser Phe Glu Ser Gly Ser Gly Gly
20 25

<210> 39
<211> 18
<212> PRT
<213> Homo sapiens

<400> 39

Trp His Ala Thr Gly Arg His Ser Ser Arg Arg Leu Leu Arg Ala Ile
1 5 10 15

Pro Arg

<210> 40
<211> 17
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide

<400> 40

Trp His Ala Thr Gly Arg His Ser Ser Arg Arg Leu Leu Arg Ala Leu
1 5 10 15

Glu

<210> 41
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide

<400> 41

Ser Arg Arg Leu Leu Arg Ala Leu Glu
1 5

<210> 42
<211> 17
<212> PRT
<213> Homo sapiens

<400> 42

Trp Gln Ser Ser Arg Pro Leu Arg Arg Ala Ser Leu Ser Leu Gly Ser
1 5 10 15

Gly

<210> 43
<211> 15
<212> PRT
<213> Homo sapiens

<400> 43

Arg Ala Ile Pro Arg Gln Val Ala Gln Thr Leu Gln Ala Asp Val
1 5 10 15

<210> 44
<211> 9
<212> PRT
<213> Homo sapiens

<400> 44

Pro Gln Arg Lys Val Phe Arg Ser Leu
1 5

<210> 45
<211> 15
<212> PRT
<213> Homo sapiens

<400> 45

Pro Gln Arg Lys Val Phe Arg Ser Leu Lys Tyr Ala Glu Ser Asp
1 5 10 15

<210> 46
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Peptide

<220>
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 <222> (1)..(1)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (13)..(13)
 <223> Xaa can be any naturally occurring amino acid

<400> 46

Xaa Val Phe Arg Ser Leu Lys Tyr Ala Glu Ser Asp Xaa Ala
 1 5 10

<210> 47
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Peptide

<220>
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 <223> Xaa can be any naturally occurring amino acid

<220>
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 <222> (11)..(11)
 <223> Xaa can be any naturally occurring amino acid

<400> 47

Xaa Arg Ser Leu Lys Tyr Ala Glu Ser Asp Xaa Ala
 1 5 10

<210> 48
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 48

Lys Ala Gly Ser Arg Gly Leu Thr Ser Leu Ala Asp Thr Phe Glu His
 1 5 10 15

<210> 49
<211> 16
<212> PRT
<213> Rattus sp.

<400> 49

Lys	Ala	Gly	Ser	Arg	Gly	Leu	Thr	Thr	Thr	Ser	Leu	Ala	Asp	Thr	Phe
1				5					10					15	

<210> 50
<211> 16
<212> PRT
<213> Homo sapiens

<400> 50

Arg	His	Ser	Ser	Arg	Arg	Leu	Leu	Arg	Ala	Ile	Pro	Arg	Gln	Val	Ala
1				5					10					15	

<210> 51
<211> 16
<212> PRT
<213> Homo sapiens

<400> 51

Arg	Lys	Val	Phe	Arg	Ser	Leu	Lys	Tyr	Ala	Glu	Ser	Asp	Pro	Thr	Val
1				5					10					15	

<210> 52
<211> 16
<212> PRT
<213> Homo sapiens

<400> 52

Thr	Pro	Gln	Arg	Lys	Val	Phe	Arg	Ser	Leu	Lys	Tyr	Ala	Glu	Ser	Asp
1				5					10					15	

<210> 53
<211> 16
<212> PRT
<213> Homo sapiens

<400> 53

Val	Thr	Pro	Gln	Arg	Lys	Val	Phe	Arg	Ser	Leu	Lys	Lys	Tyr	Ala	Glu
1				5					10					15	

<210> 54
<211> 16
<212> PRT
<213> Homo sapiens

<400> 54

Ser Gly Ser Gly Arg Ser Val Leu Ser Phe Glu Ser Gly Ser Gly Gly
1 5 10 15

<210> 55

<211> 16

<212> PRT

<213> Homo sapiens

<400> 55

His Ser Pro Gly Arg Asn Val Leu Gly Thr Glu Ser Arg Asp Gly Pro
1 5 10 15

<210> 56

<211> 16

<212> PRT

<213> Rattus sp.

<400> 56

Ala Ser Val Gly Arg Leu Ala Leu Ser Gln Glu Glu Pro Ala Pro Leu
1 5 10 15

<210> 57

<211> 16

<212> PRT

<213> Homo sapiens

<400> 57

Arg Ile Ser Asp Arg Asp Tyr Met Gly Trp Met Asp Phe Gly Arg Arg
1 5 10 15

<210> 58

<211> 16

<212> PRT

<213> Rattus sp.

<400> 58

Asp Pro Arg Leu Arg Gln Phe Leu Gln Lys Ser Leu Ala Ala Ala Thr
1 5 10 15

<210> 59

<211> 16

<212> PRT

<213> Bovis sp.

<400> 59

Leu Leu Lys Glu Leu Gln Asp Leu Ala Leu Gln Gly Ala Lys Glu Arg
1 5 10 15

<210> 60
<211> 16
<212> PRT
<213> Bovis sp.

<400> 60

Met	Ala	Arg	Ala	Pro	Gln	Val	Leu	Phe	Arg	Gly	Gly	Lys	Ser	Gly	Glu
1				5					10					15	

<210> 61
<211> 16
<212> PRT
<213> Bovis sp.

<400> 61

Glu	Leu	Glu	Asn	Leu	Ala	Ala	Met	Asp	Leu	Glu	Leu	Gln	Lys	Ile	Ala
1				5					10					15	

<210> 62
<211> 16
<212> PRT
<213> Bovis sp.

<400> 62

Ala	Ala	Met	Asp	Leu	Glu	Leu	Gln	Lys	Ile	Ala	Glu	Lys	Phe	Ser	Gly
1				5					10					15	

<210> 63
<211> 16
<212> PRT
<213> Rattus sp.

<400> 63

Lys	Ser	Ser	Phe	Thr	Asn	Val	Thr	Ser	Pro	Val	Val	Leu	Thr	Asn	Tyr
1				5					10					15	

<210> 64
<211> 16
<212> PRT
<213> Rattus sp.

<400> 64

Lys	Ser	Gln	Thr	Pro	Leu	Val	Thr	Leu	Phe	Lys	Asn	Ala	Ile	Ile	Lys
1				5					10					15	

<210> 65
<211> 16
<212> PRT
<213> Rattus sp.

<400> 65

Ser Gln Thr Pro Leu Val Thr Leu Phe Lys Asn Ala Ile Ile Lys Asn
 1 5 10 15

<210> 66
 <211> 16
 <212> PRT
 <213> Rattus sp.

<400> 66

Gly Pro Ala Arg Glu Leu Leu Leu Arg Leu Val Gln Leu Ala Gly Thr
 1 5 10 15

<210> 67
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 67

Leu Leu Arg Lys Lys Arg Thr Thr Ser Ala Glu Lys Asn Thr Cys Gln
 1 5 10 15

<210> 68
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 68

Glu Glu Ile Ser Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser
 1 5 10 15

<210> 69
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 69

Glu Glu Ile Ser Glu Val Asn Leu Asp Ala Glu Phe Arg His Asp Ser
 1 5 10 15

<210> 70
 <211> 16
 <212> PRT
 <213> Homo sapiens

<400> 70

Ile Ser Glu Val Lys Met Asp Ala Glu Phe Arg His Asp Ser Gly Tyr
 1 5 10 15

<210> 71

<211> 16
 <212> PRT
 <213> Homo sapiens

 <400> 71

 Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys Leu Val
 1 5 10 15

<210> 72
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Peptide

<400> 72

 Ser Ser Arg Arg Leu Leu Arg Ala Ile Glu
 1 5 10

<210> 73
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 73

 Ser Gly Ser Gly Arg Ser Val Leu Ser Phe Glu Ser
 1 5 10

<210> 74
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Peptide

<220>
 <221> misc_feature
 <222> (1)..(1)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (13)..(13)
 <223> Xaa can be any naturally occurring amino acid

<400> 74

 Xaa Arg His Ser Ser Arg Arg Leu Leu Arg Ala Ile Xaa Ala
 1 5 10

<210> 75

<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Xaa represents 3-nitrotyrosine.

<220>
<221> misc_feature
<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (11)..(11)
<223> Xaa can be any naturally occurring amino acid

<400> 75

Xaa Ser Arg Arg Leu Leu Arg Ala Leu Glu Xaa Ala
1 5 10

<210> 76
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide

<220>
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<222> (1)..(1)
<223> Xaa can be any naturally occurring amino acid

<220>
<221> misc_feature
<222> (14)..(14)
<223> Xaa can be any naturally occurring amino acid

<400> 76

Xaa Asn Gly Pro Lys Ala Gly Ser Arg Gly Leu Thr Ser Xaa Ala
1 5 10 15

<210> 77
<211> 11
<212> PRT
<213> Artificial

<220>
<223> peptide

<400> 77

Val Phe Arg Ser Leu Lys Tyr Ala Glu Ser Asp
1 5 10

<210> 78
<211> 9
<212> PRT
<213> Artificial

<220>
<223> peptide

<400> 78

Lys Arg Phe Val Phe Asn Lys Ile Glu
1 5